

# The Chronicle of the EARLY AMERICAN INDUSTRIES ASSOCIATION

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## Sickle, Scythe and Cradle

By JOSEPH E. SANDFORD

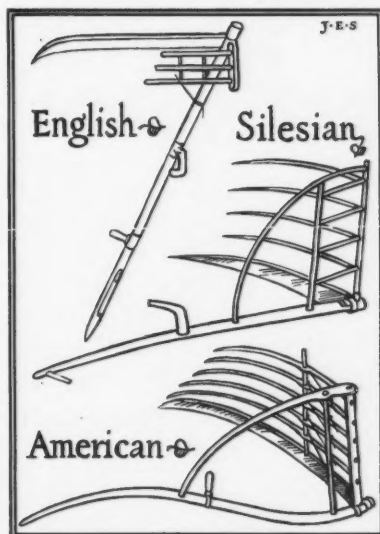
This is a brief account of the sickle and scythe which ends at the cradle — the grain cradle. This is an outline survey of the field, not a history nor a catalogue, but an attempt to show the relationship between three of the most important tools ever used.

The *sickle* consists of a curved blade with a toothed edge on the concave side, one end of the blade being fastened to a short handle. It was used for reaping grain. The gathering of straw was held by the left hand, about a foot above the point where the sickle, held in the right hand, was to cut it. The sickle came down through the ages with the reaper, its form and efficiency improving with man's techniques, flint bladed in Northern Europe (c. 3500 B.C.) and in Egypt (c. 2000 B.C.), bronze bladed (c. 1500 B.C.), and iron bladed when that metal became cheap enough for tools.

By 1785 A.D. the sickle had been refined and "streamlined" by making the blade cissoïd-curved. *Cissoïd* means *ivy-like*, the curve of one edge of the long heart-shaped ivy leaf, from stem to point. This has been called the *curve of least exertion*, because the blade so formed, was less tiring to the arm. The common sickle of the late eighteenth century was made of wrought iron faced with steel, twenty to thirty inches in length and about half an inch wide. It had sharp teeth cut in the steel edge, twenty-six to thirty teeth to the inch of length. The teeth were inclined toward the handle of the tool, so that they cut only when the sickle was drawn toward the reaper. The *reap-hook* was of much the same shape but broader, and was without teeth. The *sickle-hook* had teeth from the middle of the blade-edge to point only.

Reaping methods varied according to geography and period and depend-

ing upon factors in the grain field, or on storing and threshing methods. In ancient Egypt, under the Old Empire



GRAIN CRADLES

(c. 2800 B.C.-c. 2500 B.C.), the grain was cut about knee high. One thousand years later it was being lopped off just below the ear. Varro (118 B.C.-29 B.C.) describes long, medium and close cropping. Cutting the ears only, naturally meant that the straw was of little value, and that in all probability it was regarded as just so much more waste to be in the way on the threshing floor. The reaper could stand erect and, in hot countries at harvest, this meant that he could work more efficiently. Furthermore, weeds grow to less height than wheat, so there was little likelihood that weed seeds would be mixed with the grain. Cutting midway of the stalk has these same advantages and yields straw when it is wanted. The sickle generally left a

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## Early American Ambulances

By SIGMUND EPSTEIN, M.D.

The present-day streamlined, speedy and luxurious ambulances with all the up-to-the-minute gadgets, such as removable bed, built-in W. C., and shock-absorbing springs, which deliver the patient to the hospital five minutes after the accident, constitute a vast advance over early methods of transporting the sick and wounded.

In the days of rough-and-tumble Indian fighting, the colonists and pioneers lacked much that science and invention supply today. Instead of whisking the injured over concrete highways, or in swift-moving planes, the frontiersmen had to contend with huge mountains, dense forests and turbulent rivers, which tried their mettle and tested their stamina. Often they followed Indian trails for days to the nearest frontier post, seeking medical aid. For the transportation of the sick, they used blankets slung over two poles (Fig. 1), but in mid-winter, crudely-constructed sleds lined with straw and drawn by Eskimo dogs or men, carried the wounded.

The word "stretcher" is derived from the fact that the sustaining canvas is stretched within a frame. On the other hand, "litter" goes back to antiquity for its derivation. It comes from *lectus*, meaning "bed", which is a kind of vehicle borne upon shafts, and anciently esteemed the most easy and genteel way of carriage. Pliny calls the litter "the traveler's chamber". It was much in use in the time of the Romans, among whom it was borne by slaves kept for the purpose.

In an encounter with the Seminole Indians near Lake Okeechobee, Florida, in 1836, Surgeon Satterlee, Medical Director, praised the use of two mules arranged in tandem with raw hides slung between the two poles (Fig. 2). A certain amount of movement of the patient is impossible to

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# The Chronicle

## Corn Grinding

By R. P. HOMMEL

There is an inquiry in *Notes & Queries*, a weekly publication of London, England, in its issue of January 3rd, 1931 (Vol. 160, p. 9), about windmills and watermills used by the first settlers and asking whether the Red Indians used handmills of the type found in the East. One answer (January 31st, 1931) refers to the first poet born in America, Benjamin Thompson, the Count of Rumford (1753-1814), who describes the natives in camp engaged in various pursuits, some grinding corn with "those querns, their jaws." Another answer (February 14th, 1931) refers to a windmill on the island of Nantucket, Mass., which grinds maize for summer visitors. Of watermills there were two kinds, deriving power either from the tides, or from the current of rivers and smaller streams. Of the former, two relics remain in altered form in Boston, namely Causeway Street, a former mill-dam; and part of Beacon Street, the Roxbury Mill dam. Of mills on streams many still survive, often much disguised. There is, for instance, a great textile plant on the lower course of the Blackstone River, at Woonsocket, Rhode Island. An antiquarian once asked the manager: "Do you realize how precarious is your franchise, your waterpower being based on its use for grinding corn, not making cloth?" Forthwith the manager led his friend into the mill yard, where he wrenched up the cover, evidently disused, of a man-hole, saying: "Look down and say what you see." "A set of grindstones, apparently in working order," was the reply. "It is, bring out your corn! We remain ready to serve all comers."

The American Indians had not advanced in mechanical appliances much beyond the bow and bow drill; so their grinding was all done by hand.

Rex Wailes gives interesting information in the January 17th, 1931, issue of *Notes & Queries*: "Windmills were introduced into America at a very early date. The earliest references which I have come across are to the Dutch in New Amsterdam in 1625; the Swedes on the Delaware in 1643; the English in Massachusetts in 1660, and in Rhode Island in 1665, while they also built windmills in New York, Maryland, Carolina, and Virginia. The French and English built windmills on the St. Lawrence, and the French

also in Detroit, while the Germans built windmills in Southern Illinois in 1820. The English built in Barbados and the Spaniards in Peru. There are a number of windmills still existing in America, and a few are in operation in Quebec Province, Canada, in Rhode Island and Massachusetts, and in Barbados also. There may be others which I have not come across. Watermills were also used, but I have made no study of them. The early settlers in Massachusetts found the Indians made meal from their grain by pounding it with a stone on a wooden block. Whether the Indians used querns or not I am unable to say. I would refer the querist to my articles in "The Miller" for May, June and July, 1930. I have a large amount of information, which is too long to reproduce here, but if the querist cares to communicate with me direct *re* windmills I shall be pleased."

Reference might also be made here to a publication reviewed in the April 25th, 1931, issue of *Notes & Queries*, entitled: "Windmills" by R. Thurston Hopkins (Haywards Heath, Charles Clarke, 1s. net.) It is considered a good contribution to the scant literature about windmills.

## A Connecticut Inventor

By NEWTON C. BRAINARD

The years which followed the close of the Revolutionary War were marked by a strong tendency in the Northeastern States of our country toward replacing the old traditional hand method of production by labor-saving devices and machines. Many of the wise men of that era devoted thought and experiment to producing them. Because of his eminence in every line, Benjamin Franklin is perhaps the most outstanding figure of his day in mechanics and research into physical effects and their causes. The reputations of other men have come down to us because they produced some device which was revolutionary in its effect on industry and life. Here in Hartford we had a man, whose name has generally been forgotten, one who was an inventor and experimenter in almost as many lines as Franklin. His versatility was astounding. His name was Dr. Appollos Kinsley and his home faced Market Street, just north of Kinsley Street, which was named after him.

Little is known of the details of his inventions, since the descriptions of those which he patented were lost in the destruction of the patent office and he was smart enough not to disclose the working details of the others until he had perfected them. Many of these devices never reached the practical stage. His machine for mixing brick clay and making bricks would appear to contain the fundamental idea back of present-day machinery in that trade. The others, if ever produced, have long since disappeared from sight. The following list of the different machines he invented shows how widely he scattered his talents. He is credited with having run an auto on the streets of Hartford in 1797. His brick-making machines have been referred to. He suggested three types of cylinder presses,—a machine not then in use. One of these has been rediscovered a few years ago and was considered revolutionary in its principles. He boasted of three types of steam engines and two universal pumps. One of the latter was used on four United States warships of his day. In addition there were three tobacco cutters, a pin machine, a screw-cutting machine, a bullet caster, a type caster, a leather currier, a clock with but one cog wheel, and lastly a new form of oars.

Nothing has been learned about his life. The title "Doctor" was possibly assumed, since he is not listed among the medical men of his day. How he came to Hartford and built a handsome home, known as the Mansion House, does not appear on any of our records. His career was brilliant but short. In 1801, only five years after he built the Mansion House, we find him residing in New York, where the Directory lists him as a mechanic at 50 Wall Street. His title seems to have been lost in moving.

The writer hopes to unearth further details regarding this unusual man and his remarkable inventions and will welcome any clues which may be furnished.

"The English legislature has affixed such an imputation of proneness to shed human blood, upon persons who slaughter brute creatures for subsistence, that, by the laws of England, no butcher is permitted to serve on a jury when sitting on the life of a fellow-subject." — Willich's *Encyclopedia* (1821).

# Early American Industries Association

## Sickle, Scythe and Cradle

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stubble of from six to eight inches, and if the field contained thistles or briars, the reapers kept above them to avoid lacerations on their hands. In reaping close, there was a good chance that weeds would be taken up in the sheaf, and these would heat up if the straw was stored for winter threshing, unless the weeds were dried out in the field. When straw brought higher prices, short stubble was desired. Then, too, the field could be grazed to better advantage by cattle after harvest. Long stubble hurt their muzzles when they tried to eat the green stuff left by the sickle. This caused too much walking about in search of more comfortable feeding, and the old farmer was aware that much exercise consumes fodder, without producing the corresponding amount of milk or beef.

In England, notably in Middlesex (c. 1800), a close reaping technique called *bagging* or *fagging* was practiced. The *bagging-hook* or *fagging-hook* was about twice as heavy as the common sickle and had a smooth edge. It was sharpened when necessary by the whet-stone. The laborer hooked the wheat toward him, cutting the standing straw close to the ground with a succession of blows. The straw was often held in position for cutting by doubling over a bunch of straw and thrusting it alongside the straw to be cut, and this also kept the fingers from being chopped. A stick was frequently used for the same purpose. "Fagging" was just that — i.e. tiring.

How to reap the grain and still get a high yield of straw, without getting a back-ache, was solved by the introduction of the *Hainault* or *Flemish Scythe*, so called from the region of its origin. Whether the fagging-hook preceded the Hainault Scythe the writer knows not, except that it did in England. A similarity of purpose and method suggests the logic of this order.

The Hainault Scythe had a shorter blade than the common grass scythe. Its wooden handle was short and crank-shaped and was held in the right hand. Back of the hand-grasp was a broad round piece against which the fore-arm rested. In his left hand the laborer held a staff about four feet long, made of oak or ash, on the end

of which an iron hook was fastened, the whole looking like an inverted "L". On the handle of the scythe and the staff of the hook, at about eighteen inches from the bottom, were placed leather loops for the fingers to keep the grasps at proper distances from the ground.

The Hainault Scythe was swung by the power of the wrist principally. It cut the straw nearly at right angles close to the ground. The hook collected a small bundle that was severed at a stroke and the left foot of the reaper assisted in holding what was cut and rolled together with the hook, in the hollow of the blade. It was thus laid ready to be tied. The Hainault Scythe is pictured in use in a Flemish miniature of 1363 by Jehan Corbechon. The same miniature shows a laborer using the scythe-anvil and hammer. The continental scythes had broad malleable blades, which bent when they met with a stone or other obstruction. The mower carried a small anvil with a pointed base. This he drove into a convenient stump, and with his hammer proceeded to straighten and sharpen his scythe. He finished the job with the whet-stone. The Pennsylvania-Germans used these malleable scythes in Bucks County, Pennsylvania, until c. 1840, where these anvils are still to be found (cf *The Pennsylvania Scythe*, THE CHRONICLE, Vol. I, No. 8).

Why straw-wasting sickles, back-breaking fagging-hooks and one-handed scythes with rake-hooks, when there was already the common two-handed mowing scythe? The Romans knew it as *falx fenaria* and were mowing grass for hay with it, a century before the birth of Christ. John Florio tells us that the Italians of the mid-seventeenth century termed it *falce fenaria*. In early form it consisted of a slightly curved, smooth-edged blade, fastened at approximately right angles, by one end, to a long, straight staff or snead. The mower swung the scythe from the hips, the sweep was broad, the blade was long and the execution in proportion. Pliny the Elder (A.D. 79) mentions the whet-stone for it, which, he says, anciently came from Crete and other places beyond the sea. It was kept in oil in a mower's horn, resting on the thigh. The old Pennsylvania mower carried his in just such a horn, which held vinegar

to cut the grease. Pliny says these imported whet-stones made mowing costly and that in his day the Italians were using cheap native whet-stones which cut like a file.

Grass and wheat presented somewhat different problems. Grass could be mowed and raked "willy-nilly"; it was part of its destiny to be tumbled about in the sun to be made into hay. Wheat required a certain order in the swath for the binders and a more gentle treatment so that the ripe grain would not be shaken to the ground. The sickle filled these requirements. So fixed was this distinction, that throughout the middle-ages the mower with his scythe was the symbol for July (the hay month in Northern Europe), while the reaper with his sickle or hook stood for August (the grain month). The woodcuts in old American almanacs show this same order.

The time came when the common two-handed scythe was to be modified for use in the wheat-fields. Increased wages for farm labor, and higher prices for straw were probably contributing factors. The simplest change — though not necessarily the first — to fit the scythe for its new task, was the shortening of the blade and the addition of a bent stick fastened so as to form a "D" with the snead, just above the blade. This helped to lay the straw in the row. It is shown in Flemish engravings of the sixteenth and mid-seventeenth century. In the England of 1573, it was called the *rifle*. A form of the rifle made by making it of two overlapping twig semi-circles, was re-invented in 1755 by a laborer in the employ of M. deLille, according to Duhamel du Monceau (*The Elements of Agriculture*, London 1764). M. de Lille called these loops "le Playon" (*pleyon* is "osier" in French.) He substituted this device for the "cradle" of the Flemish scythe. The blade was also shortened. The reason given for these changes is that it enabled the scythe to cut well on furrowed ground.

Let us now consider that efficient reaping tool which became so famous that some have thought it its own ancestor. A well known textbook on American economic history says that it was "invented" in America in 1803. Of course we know that this is not true, as M. de Lille's Flemish harvest laborers were using a "cradle" back in 1753. But economists seem to be funny that way, in 1937 one wrote —



# The Chronicle

"Up to the 1840's, agriculture's technics in America had been almost as primitive as those of biblical times." So many people think civilization and steam synonymous.

The *New English Dictionary* shows that the grain cradle was known and used in England before 1573—not the well-hung long-toothed tool of America but still bearing a family resemblance. Dr. Henry C. Mercer (*Tools of the Nation Maker*, 1897) quotes from a Montgomery County, Pennsylvania, inventory of 1745 to show that it was an American farm tool at that date. He also found it in the French Encyclopedia of 1763, and made a charcoal drawing of it for the edification of visitors to the Bucks County (Pennsylvania) Historical Society Building at Doylestown.

George Washington was hiring "cradlers" for his Dogue Run Plantation as early as 1766, and there are repeated mentions of cradlers in his early July diary entries. His "Cash Memorandum Book" for July 16th, 1798, reads—"By cash paid Mr. Jno. Coslay for superintending my cradlers in harvtg. and instructing them to catch the grain, \$81 81/100."

The American cradle is described in the first American edition of *The Domestic Encyclopedia* (Philadelphia, 1803) as having "five teeth; and the handle is somewhat crooked, which tends greatly to diminish the labour in using it and to keep the grain upon the long teeth, until the reaper throws it off . . . The teeth are made of ash; that wood being tough, and yet yielding gently to pressure."

The English cradle had a straight handle and three short teeth. The clue to the origin of the American model may be found in *The Domestic Encyclopedia*, London, 1802, which illustrates and describes the *Silesian scythe* with its four long, thin wooden teeth running nearly the length of the blade, and mentions the *Austrian scythe* with five even longer teeth—the same number as the American cradle of 1803.

Great numbers of Germans came to this country in the eighteenth century and, knowing what we do, it seems altogether reasonable that they brought with them the model, on which was to be based the improved American grain cradle. The American cradle is first noticed in areas near to or colonized by Germans. For instance, the sickle gave way to the cradle-scythe in Bucks County, Pennsylvania, about 1800,

though it still lingered in New England fifty years later.

The unchallenged reign of the grain-cradle was comparatively brief. "It would be a useful discovery"—wrote Duhamel du Monceau in 1764—"to find a method of cutting corn with some machine that would ease men of a part of this heavy labour." Less than a century later the mowing machine was cutting swaths in American harvest fields.

## Metal Alloys

(Continued from page 39, column 2)

*To gild by burnishing.* This operation is chiefly performed on picture-frames, mouldings, beadings, and fine stucco work. The surface to be gilt must be carefully covered with a strong size, made by boiling down pieces of white leather, or clippings of parchment, till they are reduced to a stiff jelly; this coating being dried, eight or ten more must be applied, consisting of the same size, mixed with fine Paris plaster or washed chalk; when a sufficient number of layers have been put on, varying according to the nature of the work, and the whole is become quite dry, a moderately thick layer must be applied, composed of size and Armenian bole, or yellow oxide of lead: while this last is yet moist, the gold leaf is to be put on.

For this purpose a leaf of gold is spread on a cushion (formed by a few folds of flannel secured on a piece of wood, about eight inches square, by a tight covering of leather,) and is cut into strips of a proper size by a blunt pallet knife; each strip being then taken on the point of a fine brush, is applied to the part intended to be gilded, and is then gently pressed down by a ball of soft cotton.

The gold will immediately adhere on being pressed by the cotton ball, and before the size is become perfectly dry, those parts which are intended to be the most brilliant are to be carefully burnished by an agate or a dog's tooth fixed in a handle.

In order to save the labour of burnishing, it is a common, but bad practice, slightly to burnish the brilliant parts, and to deaden the rest by drawing a brush over them dipped in size; the required contrast between the polished and the unpolished gold is indeed thus obtained; but the general

effect is much inferior to that produced in the regular way, and the smallest drop of water falling on the sized part occasions a stain. This kind of gilding can only be applied on indoor work; as rain, and even a considerable degree of dampness, will occasion the gold to peel off. When dirty, it may be cleaned by a soft brush, with hot spirit of wine, or oil of turpentine.

## Salem Pioneer Village

The annual demonstration of early American industries was held at the Pioneer's Village, Salem, Mass., on September 11th. We quote from the *Salem News* announcement of the event:

"Some twenty-four industries will be portrayed at the village, including thatching, woodworking, heating, brick making, iron working, preparation of food, dairying, silver working, printing, shoemaking, tobacco growing, tool making, fish curing, salt making, sail making, furniture, laundering, soap making, lighting, dyeing fashions, needle work, flax breaking, spinning and weaving, herbs and drugs, human sight, and communication. \* \* \*

For the first time the ship *Arbella* will be a part of the program. Sponsored by the Salem Oil and Grease Co., a cooper will demonstrate the making of the hooped containers so necessary to life aboard ship for conservation of the water supply. A costumed sail-maker will show how the sails were made and conditioned. In the shrouds and lofty masts the riggers will be busy on the lines and sails.

Vegetable dyeing, sponsored by Lewis Cleaners and Dyers, Inc., will be another new demonstration. Contrary to popular tradition, the Puritans had many bright colors extracted from berries, barks and flowers.

With the addition of the dyeing exhibit, every 17th century process in the making of clothing will be demonstrated in Sunday's program. The culture and breaking of flax, and the spinning and weaving of it into clothes will be shown under the sponsorship of the Pequot mills. The making of garments will be demonstrated by Newmark's Women's Shop. The Work Box and Roberta-Jenney Co. will show the making of the patchwork quilt and other details of the pioneer woman's attempts to keep her family warm."

# Early American Industries Association

## Early American Industries Association

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Communications should be addressed as follows: Pertaining to the contents of *THE CHRONICLE*, to W. B. Sprague. Applications for membership, to S. E. Gage. Suggestions of prospective members, to Miss Eleanor Hudson. Other matters to Burton A. Kollmer. Addresses as here given.

W. B. SPRAGUE, Editor,  
43 Cedar St., New York, N. Y.

## Our Purpose

The purpose of the association is to encourage the study and better understanding of early American industry, in the home, in the shop, on the farm, and on the sea, and especially to discover, identify, classify, preserve and exhibit obsolete tools, implements, utensils, instruments, vehicles, appliances and mechanical devices used by American craftsmen, farmers, housewives, mariners, professional men and other workers.

## Dues

The annual dues are payable September 1st, and are as follows: Regular members \$1.00; Contributing members, \$2.00; Supporting members, \$5.00; Sustaining members, \$10.00, and up. There is no distinction between the classes, except the amount of the dues, but the publication of *THE CHRONICLE* cannot be financed unless a considerable number of the members pay more than \$1.00. Each member is expected to voluntarily place himself in the class which represents the amount he is willing to contribute to the support of the Association for the current year. *THE CHRONICLE* is sent to all members without additional charge. Many of the back numbers may be secured from the Treasurer for 20c each, and a twelve-page index to the twenty-four numbers of Volume I, containing a useful bibliography, for \$1.00 each. For further information, address any of the officers.

## Northampton Meeting

President Wiggins announced the meeting for October 29th as a "Harvest Round Up" and, to an extent which surprised even him, it turned out to be just that. The spirit of enthusiasm was evident as about one hundred and fifty members and friends gathered at Wiggins' Tavern, Northampton, Mass., and enjoyed a pleasant informal program. There were a dozen tables filled with implements, tools, etc., for the better informed to explain or guess their uses and enlighten their owners. Friendly greeting and serious discussion preceded the fall of the gavel,—an antique potato masher. One member, Edward Durrell, made a special trip from Columbus, Ohio, and a new member, Mrs. L. N. Nicolls, from Seattle, Washington, announced intentions of organizing a group in her state. The first part of the program was given to the showing of the sound film, *The Romance of The Reaper*, by Mr. Barrett from the Boston office of The International Harvester Company, which traced the development of the reaper from its invention by Cyrus McCormick in 1831 to the present-day machine. Dr. Edward D. Andrews of Pittsfield, Mass., delivered an address on the Industries of the Shakers. Following his talk, questions were invited from the floor and interesting sidelights were discussed regarding "the repentance bed", the Shaker dance, the great cradle, etc., Dr. Andrews showing a most profound knowledge of the subject. The Secretary mentioned briefly the finances, the membership situation and exhibited a number of literary works donated to the Association by their authors, notably *China at Work* by Rudolf Hommel, *March of The Iron Men* by Roger Burlingame, *Handwrought Ancestors* by Marion Nicholl Rawson, *New Jersey Agriculture*, and *From Ox Team to Tractor* by Dr. Carl Woodward, *Hour Glass Lure and Lore* by Gertrude F. Calhoun, and *The Ohio Frontier Series* by Rhea Mansfield Knittle. Short talks about their work were given by Rudolf Hommel and Marion Nicholl Rawson. Mr. Charles Messer Stow of the *New York Sun*, and Dr. Alexander Wall of the New York Historical Society impressed the members deeply with their inspiring remarks in explaining the social value of such an association. Under prom-

inent headlines, the *Sun* had this to say of Dr. Wall's address: "His tales of the eagerness with which the foreign-born seek to learn about early American objects in a museum and their struggles for an understanding of the backgrounds of the American people gave the members of the Early American Industries Association an entirely new conception of the value of their work and a cogent hint of the service they may render. Dr. Wall did not outline any course of procedure for the organization, but his talk was so full of meat and his own idea of educational service was so clear that he inspired his hearers with a new sense of the importance of gathering and spreading information about early handicrafts and industrial processes, and he left with them the certainty that they are engaged in a work which will have a profound effect in maintaining peace in this country." President and Mrs. Wiggins entertained graciously with a New England supper, which lacked not a thing to make it perfect, and with the "Good Night!" to the hosts went the pledge of further support and increased activity.

B. A. K.

The following notice of a very important discovery in medicine (announced in *The Rural Magazine* of 1819) would not appeal to most of us today:

"Col. Utley makes no pretensions to a knowledge of science, having spent his days in the active business of life. Without possessing a knowledge of botany, he, perhaps by accident, to which most of the important discoveries may be attributed, discovered shrubs in Connecticut, which, applied to an aching tooth, would remove its pain. From those he has formed a decoction or tincture, which, applied to the gums, after of course scarifying them, almost invariably effects a cure. It also removes scurvy from the gums; and, by its strong astringent power, often fastens loose teeth. Scarce a person can be found who has not been more or less afflicted with the toothache; and to lose them by extraction is not only painful, but highly disadvantageous to the public speaker, and a great blemish to personal beauty. To preserve teeth is most desirable and it is believed that "Utley's Remedy" will preserve them." L. B. R.

# The Chronicle

## Ambulances

(Continued from page 49, column 3)

prevent and "causes much discomfort," he said. The kind of movement communicated to the mule litters, by the action of the animals walking, is peculiar.



Fig. 1 — INDIAN HAND LITTER

iar. It is totally different from the sudden jolts, or the general concussion liable to interfere with the comfort of patients when carried on wheeled vehicles. Good mules are so sure-footed and so steady in their gait, that they rarely ever stumble, so as to jolt the men they are carrying. But the progression of the animals causes the litter to have a movement which has something of an undulatory character, that would not be unlikely to cause a condition like sea-sickness. However, this method of carriage proved better than the springless ambulances then used by the government, for it was almost free from vibration.

Dr. E. Swift, Assistant U. S. Medical Purveyor, reports that during the

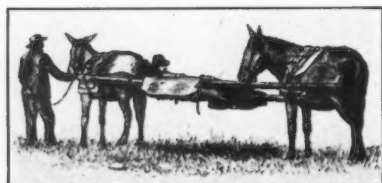


Fig. 2 — TANDEM MULE LITTER

Mexican War, Lieutenant Schuyler Hamilton, aide to General Scott, was severely wounded at Mille Flores, where a foundry was manufacturing shot and shell for the Mexican Army. A lance two and a half inches wide was thrust from behind six and a half inches into his lung. The lieutenant was conveyed a short distance to headquarters at Chalco, where a horse-litter was constructed of tent-cloth and two long canal-boat setting poles, to which were harnessed a horse or mule

in front and rear of the patient (Fig. 3); on this litter, he travelled several days with the army on its march to the City of Mexico. Many sick and wounded were conveyed from here to the coast on litters provided with a covered frame-work for protection from sun and rain. Litters were frequently improvised for temporary purposes by means of blankets knotted at their corners to the ends of two muskets. A blanket passing under the arms and knotted over the opposite shoulders of two men, often formed a seat on which the patient was conveyed in comparative ease and comfort. Sometimes wounded men were carried off the field in a kind of chair strapped to a comrade's back, after the manner of conveying travellers over mountains in South America.

The Indians made use of the *travois* to transport their wounded. This device



Fig. 3 — TWO-HORSE LITTER

vice requires one horse, harnessed to two shafts, the free ends of which trail on the ground. Lodge-poles were held in position by cross-pieces, with raw hides stretched between, and were made of some elastic wood such as ash, lance-wood, hickory or white pine saplings, sixteen feet in length. This permitted a wounded man, with even such an injury as a fractured thigh, to assume an almost recumbent position (Fig. 4).

For military purposes, this one-horse litter lent itself particularly well to Indian trails and prairie country, but the drag ends were difficult to hold up in fording a river, where the poles with their burden had to be lifted. Here two-horse litters were better adapted. In Dr. Swift's opinion, the Indian travois almost equalled the two-horse litter in providing comfort.

In 1876, the United States Army used the travois for sick transport service in the Big Horn Expedition in Wyoming. The journey of Corporal Egan, who was carried in comfort for days on the march, with a bad wound, is described in a report to the Surgeon-General of the U. S. Army on the subject of "Transportation of Sick and Wounded by Pack Animals". The weather was intensely cold and the route to the base camp, one hundred miles away, led through mountainous country that seemed impassable for a horse or mule.

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Fig. 4 — TRAVOIS OR INDIAN HORSE LITTER

Soon after the gold rush, railroads cut through the Rockies to California; the land was cleared and hospitals were built. In early frontier fighting, the doctor found that first-aid emergencies taxed his ingenuity and resourcefulness to the utmost. That the wounded survived at all, speaks volumes for the courage and manhood of these hardy pioneers and soldiers.



How many of us have realized that "pure leaf lard" was a trade name? Finding a lard squeezer of two ash handles, fastened with a large peg, in turn fastened with a hand-made nail, caused me to inquire into the process of getting fat from a hog for lard. It seems that the best fat was that found near the kidneys and, when taken out, was in the shape of a leaf, and called "leaf lard". The fat was pressed in these squeezers of wood and the grease was clarified and made into lard. The part that was left was dried and used as "pork scraps," which are hardly ever seen nowadays.

M. E. G.



Willich's *Encyclopedia* (1821) quotes from the *Gentleman's Magazine* for 1758 a description of a cork waistcoat for preventing drowning accidents, practically identical with those in use today. Willich says: "If the corks of old bottles are saved, and strung together, and then sewed up in linen, five hundred will make a good cork jacket."



# Early American Industries Association

## Membership

Membership lists should be amended as follows: (N) indicates new member; (S) indicates non-member subscriber; (C) indicates change of address; (D) indicates decease; (R) indicates resignation; (Co) indicates correction.

### CALIFORNIA

*Culver City*: Bruce, Robert R., Research Dept., M.G.M. Pictures (N)

### CONNECTICUT

*Danbury*: Mallory, W. E. (D)

*Greenwich*: Coggins, H. Lawrence, P. O. Box 1062 (N)

*Hamden*: Wood, Miss Ella F., 205 Washington Ave. (N)

*Meriden*: Ives, C. W. (R)

*Norwalk*: Byard, J. K., Silvermine (N)

*Suffield*: Van Horn, Mrs. John, Kings Corner (N)

### MASSACHUSETTS

*Amherst*: Luther, Rev. Clair F. (D)

*Attleboro*: Hubbard, Howard G., R. F. D. No. 1, Box 45 (C)

*Berlin*: Dudley, Ira G. (R); Dudley, Mrs. Sarah H. (D)

*Leicester*: Peirce, Mrs. Frank D. (N)

*Needham*: Walker, William, Great Plain Ave. (N)

*Northampton*: Childs, Mrs. Charles E., 81 Henshaw Ave. (N); Faulkner, Mrs. Harold Underwood, 26 Barrett Pl. (N); Lange, Mrs. Carl, 58 Bridge St. (N); Northampton Historical Society, 2 West St. (S); Williston, Mrs. H. S., 35 Round Hill (N)

*South Deerfield*: Hobbie, Mrs. E. W. (N)

*South Hadley*: Bump, Boardman, 73 College St. (N); Bump, Mrs. Boardman, 73 College St. (N)

*Waltham*: Sturdy, H. P., 40 Harris St. (N); Sturdy, Mrs. H. P., 40 Harris St. (N)

*West Springfield*: Estey, R. B., 28 Van Horn St. (N); Estey, Mrs. R. B., 28 Van Horn St. (N)

*Winchester*: Nichols, Mrs. Nathaniel M., 29 Crescent Rd. (N); Mott, Mrs. Percival, 4 Wolcott Terr. (N)

### MARYLAND

*Baltimore*: Mencken, H. L., 1524 Hollins St. (C)

### NEW HAMPSHIRE

*Francestown*: Trufant, C. F. (N)

*Walpole*: Baker, Lee Byron (N)

*Westmoreland*: Paine, Miss Lucy I. (N)

### NEW JERSEY

*Bernardsville*: Childs, William (D)

*Elizabeth*: Union County Historical Society, 560 Cherry St. (S)

*Morristown*: Keller, Albert T., Washington Valley Rd. (C)

*Newark*: Newark Public Library, 5 Washington St. (S)

*Scotch Plains*: Armbruster, Mrs. William (R)

*Weehawken*: Pentland, Mrs. Peter, 2 Potter Place (N)

### NEW YORK

*Albany*: Rextrew, H. C., 36 Edgewood Ave. (N)

*Baldwin*: Duerk, Philip, 32 Lakeside Dr. (N); Duerk, Mrs. Philip, 32 Lakeside Dr. (N); Fisher, Robert, 25 Prospect St. (N); Fisher, Mrs. Robert, 25 Prospect St. (N)

*Bedford*: Coopernail, Dr. G. P. (N)

*Chatham Center*: Williams, Roger (N)

*Flushing*: Walker, William H. (D)

*Hempstead*: Guildersleeve, Mrs. John S., 117 Washington St. (N)

*Hudson*: Bradley, Mrs. O. H., 813 Warren St. (N)

*Ithaca*: Force, Albert W., Forrest Home (N)

*Kinderhook*: Leath, James E. (N)

*New York*: Haire, Andrew J., 1170 Broadway (N); Kilmer, Mrs. T. W., 165 W. 85th St. (N); Newhall, Mrs. Beaumont, 51 W. 53rd St. (N)

*Old Chatham*: Williams, John S. (N); Williams, Mrs. Sarah (N)

*Schenectady*: Spear, Mrs. F. L., 1368 Keyes Ave. (N)

### RHODE ISLAND

*Providence*: Allen, Alexander, 195 Freeman Parkway (N); Allen, Mrs. Alexander, 195 Freeman Parkway (N); Knight, Clinton Prescott, Jr., 146 Westminster St. (N)

### VERMONT

*Springfield*: Bowman, A. C. (R)

### VIRGINIA

*Williamsburg*: Norton, B. W., Colonial Williamsburg, Inc. (N)

### WASHINGTON

*Seattle*: Nicolls, Mrs. L. N., 16505 Aurora Ave. (N)

### POLAND

*Warsaw*: Biddle, Hon. Anthony Drexel, Jr., U. S. Embassy (N)

## The Questionnaire

Questionnaires recently received have been tabulated as follows. For key to abbreviations, see page 7.

### NEW YORK

*Bedford*: Dr. G. P. Coopernail (C). Collects KH, LD, SM, also metal powder flasks and candle moulds. Wants LP. Write \*. Visit.

*New York*: Andrew J. Haire (C), 1170 Broadway. Collects KH. Wants LP. Write \*. Visit.

*Old Chatham*: John S. Williams (C). Collects FI, FT, also HD, HF, KH, LD, MA, TC, WM, insofar as the latter have to do with the farmer or small farming mechanic and his domestic craftsmanship, etc. Wants LP. Write \*. Visit.

## New Jersey "Chapter"

A splendid start toward a sectional organization in New Jersey was made on November 21st, when about thirty men and women, residing in the general vicinity of East Orange, met for dinner at the Hotel Suburban, at the suggestion of Mr. Wallace K. Brown. President Lewis N. Wiggins, Secretary and Treasurer Burton A. Kollmer and Editor William B. Sprague were also present. Following the dinner, after brief remarks from the officers of the Association, Mr. Brown, acting in-

formally as chairman, invited expressions of opinion as to the feasibility and desirability of making arrangements whereby the members of the Association residing in New Jersey might be brought into personal contact with each other with some frequency. It was immediately apparent, from the discussion which ensued, that the sentiment in favor of such a plan was unanimous, and many valuable suggestions were made, especially that each such meeting should have a definite objective, such as visiting the various collections of members, making "pilgrimages" to some of the important museums, and the like. Definite action was taken by the appointment of a committee, consisting of Mr. Brown, as chairman, Mrs. Marion P. Banks, Mrs. Edith C. Goodwin, Mr. Webster Tallmadge, Mr. C. Carroll Palmer, Mr. Niles R. Moffat, Mr. John M. Connor and Dr. Carl W. Woodward, consultant, to study out the necessary details and to report their recommendations at a later meeting to which all New Jersey members would be invited, as well as those residing in neighboring states, who had evinced an interest. If any member, whose address is not in New Jersey, desires to keep in touch with this situation, he should so notify Mr. Brown, at No. 7 Warren Place, Montclair, N. J.

After the meeting adjourned, those present availed themselves of an invitation to attend the monthly meeting of The Antique Club of New Jersey, at which they listened to a most scholarly lecture by Dr. Carl W. Woodward, of Rutgers University, on "The Implements of Early American Agriculture," illustrated by lantern slides. The officers of our Association addressed the joint meeting, drawing attention to the advantages of membership and the valuable educational work which deserved support. Judging from the interested attitude of the audience, it is hoped that this will result in a substantial increase in our roster.

In preparing meat for the winter, the Indians had a peculiar method of their own. They loosened a strip of meat with a knife, took it between their teeth and jerked it off the carcass in a long strip. This was called "jerk meat." These strips were hung on limbs of trees to dry in the sun and stored for winter supply. M. E. G.

# The Chronicle

## COMMUNICATIONS

From MR. D. A. CARD:

"Just a few words which may be of interest to your readers and supplementing the mention, made in the last issue of THE CHRONICLE, of Hadley chest No. 144. This chest initialed M.S. was (beyond reasonable doubt) made for Mercy Smith, born at Hadley on July 3rd, 1694. The daughter of 'Orphan John' Smith and Mary Root Smith. Mercy married Joseph Eastman on November 22nd, 1711, thus dating the chest at about 1700 as a 'dowry chest'. Rachel Eastman married John Clary, the great-grandfather of the lady from whom I secured the chest. This information is a matter not only of family tradition but of family record. Also it checks in all detail with data previously assembled by Mr. Luther, so would seem entirely probable. The chest is very similar to Luther No. 64, — so similar that with the exception of initials they might be described from one photograph. An interesting family connection is suggested by Luther No. 31, ascribed to Mercy Eastman, daughter of M. S., for whom No. 114 was made. I am recently in receipt of a note from Mrs. Luther saying that my copy of 'The Hadley Chest' was the last autographed by Mr. Luther before his death. Although I did not know him personally, I had received several most kind and helpful letters from him concerning chest No. 114. I would believe that through his death the cause of antiquarian research has lost a champion, a thorough student and a genial gentleman. I would extend an invitation to members of the Association to inspect chest No. 114 if they care to do so."

From MR. L. L. THWING:

"After reading Mr. William B. Sprague's excellent article on coopering (THE CHRONICLE, Vol II, No. 5), I examined with interest a cask of small diameter, probably a hundred years old, that stands in the yard of the Essex Institute at Salem. The staves of this cask were originally about three-quarters of an inch thick, and are bent more than the average stave. Mr. Walter Knights of the Institute agreed with me that no wrapping with ropes tightened by wind-

lasses could ever have pulled the head ends of these staves together. Mr. Sprague quotes the *Encyclopedia Britannica* to the effect that staves were heated or steamed to enable them to be bent to shape. It is common knowledge that steaming would accomplish this, but would heat have any effect, except possibly on green wood? I recall visiting a barrel factory in Goff's Falls, N. H., about 1897. The technique there was to put the barrels over the cresset or open top stove, after the staves were assembled and held together with temporary iron hoops. This same method is evidently being used in the cooper's shop illustrated in Griffin's *Trades*, reproduced in Mr. Sprague's article. Heat, in this instance, would seem to have been used to set the bend, rather than to soften the staves. Mr. Knights made a valuable contribution on the subject of bending staves. He had heard from an old whale-oil-cask cooper, that the staves were assembled, held together by a single hoop, and then set over a bed of coals on which damp sea weed was laid, then the whole thing was covered with an old sail. This would soften them and they could then be drawn in at the ends by windlass-tightened ropes, and hooped up. This at least is a plausible explanation. It is possible that early 18th-century casks and barrels were more nearly cylindrical than they were later. There is some evidence to that effect. The fact that wood could be easily bent, after it had been steamed, was not then known. It was first practiced — if I recall correctly — about 1760, or even later."

From MR. HORACE M. MANN:

"One of our directors has come across an old dark green bottle or flask which he would like to identify. I enclose the tracing of the trade mark which I assume he took direct from the bottle. 'Thos. Smith, King-side(?) 1735'. I could not find any reference to Thomas Smith in Stephen Van Rensselaer's book on old bottles nor in any other reference I have. I wonder if any of the members of the Association has any information?"

Mr. William M. Van Winkle, to whom we referred this inquiry, replies

as follows: "The tracing of the mark on the bottle which you sent me is undoubtedly that of the name of the owner, which was often stamped on a pellet of glass and sealed to the bottle itself. This is without any question in my mind an English bottle, probably for port or madeira. It has all the earmarks and the date would also bear this out. Major Berry of Berry Brothers in London issued a small booklet on this type of bottle and I only know of one bottle bearing these seals that could possibly have been made in America. They were, however, quite common in England."

From MISS MARY EARLE GOULD:

"The bread trough is the deep, oblong, box-like structure with a cover. The early ones have dove-tailed ends. As the trough is made with slanting sides, smaller at the bottom, the cover does not need any support, but just sets in. At either end of the trough, below where the cover rests, there is a notch. On this rested the lintel, a thin stick of wood. The dictionary says that a lintel is a support, as over a fireplace or over a doorway or window. So the lintel in the bread trough supported the sieve as it sifted the flour into the bread dough. Lintels are seldom found in the old troughs, as they were easily lost. Examples may be seen in the old Fairbanks Homestead and at the Wells and Skinner museums. An unusual type of bread trough was the one made with legs, like a table. It is built very sturdily and is a table and trough combined."

Those members, who have received their bound volumes of Volume I from the binders, are so enthusiastic about the fine appearance of the book and the increased convenience in using it for reference, that we venture to remind all those who have complete files of Vol. I, Nos. 1 to 24 inclusive, and the index, that they may have them bound by sending them to Lafayette Bookbinding Co., 151 Lafayette St., New York, N. Y., with remittance of \$2.75.



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